1.     A method of simultaneously transmitting data packets to multiple users using limited transmission power comprising the steps of:

    a)     establishing transmission power requirements for each user,

    b)     receiving in a queue a plurality of data packets for transmission to one or more users,

    c)     selecting one or more data packets for transmission in a composite burst with cumulative power for the selected packets not exceeding the limited transmission power,

    d)     transmitting the selected data packets in a composite burst within the limited transmission power, and

    e)     repeating step c) until all data packets in the queue have been transmitted.

2.     The method as defined by claim 1 wherein step a) includes determining a signal to noise ratio in the transmission link to each user whereby requisite power can be determined for a desired level of data reception.

3.     The method as defined by claim 2 wherein step c) includes identifying data packets which have been delayed in transmission, and giving priority in selection to delayed data packets.

4.     The method as defined by claim 3 wherein step c) further includes assigning a priority weight to users based on quality of service subscribed by the user.

5.     The method as defined by claim 4 wherein step c) further includes assigning a priority weight based on explicit prioritization of packets.

6.     The method as defined by claim 4 wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission.

7.     The method as defined by claim 4 wherein each packet is assigned to a different carrier frequency for simultaneous multiple access transmission.

8.     The method as defined by claim 1 wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission.

1            9.      The method as defined by claim 8 wherein step c) includes identifying

2   data packets which have been delayed in transmission and giving priority in selection to

3   delayed data packets.

1           10.     The method as defined by claim 8 wherein step c) further includes

2   assigning a priority weight to users based on quality of service subscribed by the user.

1           11.     The method as defined by claim 8 wherein step c) further includes

2   assigning a priority weight based on explicit prioritization of packets.

1           12.     The method as defined by claim 1 wherein each packet is assigned to a

2   different carrier frequency for simultaneous multiple access transmission.

1           13.     The method as defined by claim 12 wherein step c) includes

2   identifying data packets which have been delayed in transmission and giving priority and

3   selection to delayed data packets.

1           14.     The method as defined by claim 12 wherein step c) further includes a

2   priority weight to users based on quality of service subscribed by the user.

1           15.     The method as defined by claim 12 wherein step c) further includes

2   assigning a priority weight based on explicit prioritization of packets.

1           16.     Apparatus for selecting data packets for simultaneous transmission to

2   multiple users using a limited transmission power comprising:

3           a)      a memory for receiving in a queue a plurality of data packets for

4   transmission to one or more users,

5           b)      power determining means for establishing power requirements for

6   transmitting data to each user based on signal to noise ratio in each link to each user, and

7           c)      data packet selection means for selecting one or more data packets for

8   transmission in a composite burst with cumulative power for the selected packets not

9   exceeding the limited transmission power, the selecting means delaying packets as necessary

10  to accommodate the limited transmission power.

1           17.     Apparatus as defined by claim 16 wherein the selection means gives

2   priority in selection to delayed data packets.

18. Apparatus as defined by claim 16 wherein the selection means gives priority in selection to users based on quality of service.

19. Apparatus as defined by claim 16 wherein the selection means gives priority in selection to preassigned explicit priority of packets.

20. Apparatus as defined by claim 16 wherein the selection means gives priority in selection to delayed data packets, quality of service subscribed by each user, and explicit priority of packets.

21. Apparatus as defined by claim 20 wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission.

22. Apparatus as defined by claim 20 wherein each packet is assigned to a different carrier frequency for simultaneous multiple access transmission.

23. Apparatus as defined by claim 16 wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission.

24. Apparatus as defined by claim 16 wherein each packet is assigned to a different carrier for simultaneous multiple access transmission.